Concord 12004

Sewalls Falls Road Bridge over the Merrimack River

Alternatives Summary Matrix

Typical Section Sidewalk Ingineering Issues Design Speed Profile Maintenance of Traffic Maintenance of Traffic Maintenance of Traffic Phased bridge construction? Approx. construction duration Sewer and gas lines Ight-of-Way Impacts Fish & Game property State LCIP property Concord Monitor Residential property opposite Concord Monitor Residential property opposite Concord Monitor Residential property opposite Concord Monitor Residential property Concord Monitor Residential property Fish & Game boat ramp LCIP property Fish & Game boat ramp LCIP property Fish & Game boat ramp Elcodplain/floodway Potential eagle perch trees Brook Floater mussels Dommunity Resource Impacts Emergency Response Time During Construction Bicycle/Pedestrian Safety Improvement Aesthetic Impact Recreational Impacts Recreational Impacts City Cost Lity Cost) - Essement only - Acquisition of Right-of-Way required - Assumes bridge type to be Steel Girder/RC Deck Impacts to the boat ramp can be mitigated by constructing a flankir Boat ramp may need to be closed temporarily during construction Boat ramp may need to be closed temporarily during construction Roternate funding will be required for rehabilitation of the existing brid	5' Shider -12' Lane - 5 feet on b Alternative 4 Off-Line Upstream 35 mph 35 mph 35 mph On existing bridge No 2 seasons Can remain on exist bridge Minimal (E) Substantial (A) Substantial (A) Minimal (E) Can remain in place None Substantial Minimal Moderate Minimal Substantial Substantial Substantial Minimal Moderate Substantial Minimal Substantial Substantial Substantial Substantial Substantial Substantial Substantial Minimal Moderate Standard****	On-Line 35 mph 35 mph 35 mph 36 mph Bridge closed during construction No 2 seasons Relocated Moderate (E) Substantial Substantial Moderate	One Way - 18' Lane One 5' wide sidewalk Alternative A Rehab Existing 35 mph w/ Lighting 20 mph Bridge closed during construction (open winters) No 2 seasons Can remain on exist bridge Minimal (E) Minimal (E) Moderate (E) Can remain in place None Moderate Minimal	18' Existing - 20' New One 5' wide sidewalk Alternative B Rehab Exist Add 2nd One Way Truss on Upstream Si 35 mph w/Lighting 20 mph On existing bridge No 3-4 seasons Can remain on exist bridge Minimal (E) Substantial (A) Minimal (E) Can remain in place None Substantial Minimal Moderate Minimal
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Ost Stool Circles Beinforced Congrete Dook		ie proposed sidewaik over tile railip,	or resocuting the ramp	
Steel Girder/ Reinforced Concrete Deck Bridge Construction	\$ 4,613,000.00	\$ 4,613,000.00		
Removal of Exist. Truss Bridge	\$ 4,613,000.00	\$ 117,600.00		
Removal of Exist. Approach Spans	\$ 153,500.00			
Roadway Construction	\$ 1,147,000.00			
Right-of-Way	\$ 200,000.00 \$ 500,000.00			
Engineering Existing Bridge Rehabilitation *	\$ 788,220.00			
Approx. maintenance cost of existing bridge (over 25	\$ 81,400.00			
years)	\$ 61,400.00	Φ -		
Utility Relocations Total	? \$ 7,483,120.00	\$ 6,366,100.00		
Steel Truss	Ψ 7,400,120.00	ψ 0,000,100.00		
Bridge Construction	\$ 8,000,000.00	\$ 8,000,000.00		
Removal of Exist. Truss Bridge	\$ 117,600.00			
Removal of Exist. Approach Spans Roadway Construction	\$ 153,500.00 \$ 1,147,000.00			
Right-of-Way	\$ 200,000.00			
Engineering	\$ 500,000.00			
Utility Relocations	? \$ 10,118,100.00	? \$ 10,118,100.00		
Wooden Covered Bridge	\$ 10,118,100.00	Ψ 10,116,100.00		
Bridge Construction	\$ 8,500,000.00	\$ 8,500,000.00		
Removal of Exist. Truss Bridge	\$ 117,600.00	\$ 117,600.00		
Removal of Exist. Approach Spans	\$ 153,500.00 \$ 1,147,000.00			
Roadway Construction Right-of-Way	\$ 1,147,000.00 \$ 200,000.00			
Engineering	\$ 500,000.00			
Utility Relocations	?	?		
Total	\$ 10,618,100.00	\$ 10,618,100.00		
Rehab Existing Truss				
Rehabilitation of Exist. Truss Bridge			\$ 2,800,000.00	
Removal of Exist. Approach Spans Roadway Construction			\$ 153,500.00 \$ 350,000.00	
Right-of-Way			\$ 100,000.00	
Engineering			\$ 500,000.00	
Utility Relocations Total			? \$ 3.903.500.00	
Total	JL	I	\$ 3,903,500.00	<u>I</u>
Rehab Existing Truss and Add 2nd One-Way Trus	s			
Bridge Construction		-		\$ 4,500,000
Rehabilitation of Exist. Truss Bridge Removal of Exist. Approach Spans				\$ 2,800,000. \$ 153,500.
Removal of Exist. Approach Spans Roadway Construction				\$ 153,500. \$ 1,147,000.
Right-of-Way				\$ 200,000.
Engineering				\$ 500,000
Utility Relocations Total				? \$ 9,300,500
Total	JL		<u> </u>	
	Pionnial inongstics (\$2500	Truss Maintenance (pr	resent value analysis of 25 year	costs, assuming 3% APR)
	Biennial inspection (\$2500 every 2 years)	\$ 21,000.00		\$ 21,000
	Misc. Painting (\$15000 every 5 years)	\$ 50,000.00		\$ 50,000
	Misc. Repairs (\$8000 every	Ψ 50,000.00		Ψ 50,000
	10 years) Total	\$ 10,400.00 \$ 81,400.00		\$ 10,400 \$ 81,400 .